DOCUMENT RESUME

ED 040 511 24 EA 002 931

TITLE	Directional and Informational Signs for Educational Facilities. A Selected Bibliography.
INSTITUTION	Wisconsin Univ., Madison. ERIC Clearinghouse on Educational Facilities.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-7-0883
PUB DATE	May 70
CONTRACT	OEC-1-070883-5095
NOTE	14p.
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.80
DESCRIPTORS	*Bibliographies, Building Design, Color, Design Needs, *Educational Facilities, *Environmental Research, Graphic Arts, Information Dissemination, *Physical Environment, Physiology, Psychological Design Needs, Signs, *Visual Discrimination

ABSTRACT

Many of the references in this bibliography are followed by a listing of ERIC descriptors to indicate the contents. The literature is pertinent to educational facilities design in providing for visual orientation, comprehension, and response to the physical environment. Listed items are presented in two sections: (1) human physiological, psychological, and sociological requirements for visual performances; and (2) the design of visual communications. (MLF)

3

2

ED 040511

CLEARINGHOUSE ON
EDUCATIONAL
FACILITIES

ERIC CEF

EDUCATIONAL RESOURCES INFORMATION CENTER • 606 STATE STREET, ROOM 314 • MADISON, WIS. 53703

DIRECTIONAL AND INFORMATIONAL SIGNS FOR EDUCATIONAL FACILITIES

A Selected Bibliography

May 1970

EA 002 931

ED040511

BR-7-0883
PA 24

DIRECTIONAL AND INFORMATIONAL SIGNS FOR EDUCATIONAL FACILITIES

The work presented herein was performed pursuant to a contract with the U. S. Office of Education, Department of Health, Education, and Welfare (OEC-1-7-070883-5095).

ERIC CLEARINGHOUSE ON EDUCATIONAL FACILITIES

The University of Wisconsin

Madison, Wisconsin

May 1970

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

INTRODUCTION

This compilation is a survey of the literature pertinate to the design of educational facilities in providing for visual, orientation, comprehension and response to the physical environment. The literature presented is indicative of the state of the art of this topic as it relates to--(1) primary investigations to determine the psychological, biological and physiological relationship of man to his visual environment, (2) sources pertinate to development of the visual environment and visual communications facilities through design.

Each indexed reference source identified is followed by an alphabetical listing of descriptors which were selected to describe the subject elements of each document. Major descriptors are the most important descriptors assigned to a given document and are identified by an asterisk. The descriptors used throughout this bibliography are part of the Thesaurus of ERIC Descriptors, which is used for indexing, storing, and retrieving documents handled by the ERIC system.

CONTENTS

1. HUMAN PHYSIOLOGICAL, PSYCHOLOGICAL, AND SOCIOLOGICAL REQUIREMENTS FOR VISUAL PERFORMANCE.... 4

2. THE DESIGN OF VISUAL COMMUNICATIONS..... 10

HUMAN PHYSIOLOGICAL, PSYCHOLOGICAL, AND SOCIOLOGICAL REQUIREMENTS FOR VISUAL PERFORMANCE

Allen, T. M.; and A. L. Straub. "Highway Sign Brightness and Legibility", Highway Sign Studies, Progress Report 6. Charlottesville, Virginia: Virginia Council of Highway Investigation and Research, University of Virginia, Thorton Hall, Box 3817, University Station, 1955.

Allport, Floyd H. Theories of Perception and the Concept of Structure. New York: John Wiley and Sons, Inc., 1955.

Avera, L. F. "Color--What It Is and How Do We See It", American Journal of Optometry, 16 (1939), 14-21.

Bartleson, C. J. "Memory Colors of Familiar Objects", Journal of the Optical Society of America, 50 (1960), 53-77.

Bechtel, Robert B. Human Movement and Preference. Topeka, Kansas: Architectural Environment and Human Behavior, 2700 West 6th Street. 14 pp.

*Body Image; *Building Design; *Interior Space; *Kinesthetic Perception; *Psychological Design Needs; Behavior; Controlled Environment; Design Needs; Equipment; Evaluation; Experiments; Human Body; Motion; Planning; Public Facilities; Research; Response Mode; Test Construction

Berger, C. II. "Stroke-width, Form and Horizontal Spacing of Numerals as Determinants of the Threshold of Recognition", Journal of Applied Psychology, 28 (1944), 336-346.

Birren, Faber. "Psychological Implications of Color and Illumination", Illuminating Engineering, 64 (May 1969), 397-402.

*Color; *Environmental Influences; *Environmental Research; *Lighting; *Psychological Design Needs; Controlled Environment; Illumination Levels; Physiology; Vision; Visual Perception

Boice, M. L.; Tinker, M. A.; and D. G. Patterson. "Color Vision and Age", American Journal of Psychology, 61 (1948), 520-526.

Brian, C. R. and F. L. Goodenough. "The Relative Potency of Color and Form Perceptions at Various Ages", Journal of Experimental Psychology, 12 (1929), 197-213.

Broadbent, D. E. Perception and Communication. New York: Pergamon, 1958.

Bruner, I. S.; Postman, L.; and J. Rodrigues. "Expectation and the Perception of Color", American Journal of Psychology, 64 (1951), 216-227.

Chapanis, A. "Relationships Between Age, Visual Acuity, and Color Vision", Human Biology, 22 (1950), 1-33.

Committee on Colorimetry, Optical Society of America. The Science of Color . New York: Thomas Y. Crowell Company, 1953.

Elliott, F. R. and C. M. Louttit. "Auto Braking Reaction Time to Visual Auditory Warning Signals", Proceedings of the Indiana Academy of Sciences, 47 (1937), 220-225.

Eysenck, H. J. "A Critical and Experimental Study of Color Preferences", American Journal of Psychology, 54 (1941), 385-394.

Ferree, C. E. and G. Rand. "Visibility of Objects as Affected by Color and Composition of Light. Part II. With Lights Equalized in Both Brightness and Saturation", Personnel Journal, 10 (1931), 108-124.

Gibson, James J. The Perception of the Visual World. Boston, Mass.: Houghton Mifflin Company, 2 Park Street, 1950.

Gregory, R. L. Eye and Brain, the Psychology of Seeing World and University. New York: McGraw-Hill, 1966.

*Color; *Light; *Physiology; *Psychology; *Visual Perception; Biology; Environmental Influences; Visual Environment

Grossfeld, Henry D. "Visual Space and Physical Space", Journal of Psychology, 32 (1951) 25-33.

Hall, E. T. The Silent Language. New York: Doubleday and Company, 1959.

Hardy, LeGrand; Rand, Gertrude; Rittler, M. Catherine; Blank, Albert A.; and Paul Boeder. The Geometry of Binocular Space Perception. New York: Columbia University, Knapp Memorial Laboratories, Institute of Ophthalmology, 1953.

Harmon, Darell. The Co-ordinated Classroom. Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-$0.25, HC-$2.16, ED 020 621. 1951. 52 pp.

*Design; *Environment; *Furniture; *Lighting; Building Design; Classroom Design; Classroom Environment; Classroom Furniture; Educational Equipment; Furniture Design; School Design

Hecht, S. and E. U. Mintz. "The Visibility of Single Lines at Various Illuminations and the Retinal Basis of Visual Resolution", Journal of General Physiology, 22 (1939), 593-612.

Jacobson, H. "The Informational Capacity of the Human Eye", Science, 113 (1951), 292-293.

Jones, E. H. and F. C. Sumner. "Relation of the Brightness Differences of Colors to their Apparent Distances", Journal of Psychology, 26 (1948), 25-29.

Larson, C. Theodore. Environmental Abstracts. School Environments Research Publication No. 1. Ann Arbor, Michigan: Publication Distribution Service, University of Michigan, 1965.

*Acoustical Environment; *Behavior; *Environmental Research; *Lighting; *Social Environment; Environmental Influences

Larson, C. Theodore. Environmental Evaluations. School Environments Research Publication No. 2. Ann Arbor, Michigan: Publication Distribution Service, University of Michigan, 1965.

*Environmental Criteria; *Environmental Influences; *Environmental Research; *Physical Environment; *School Environment; Acoustical Environment; Climate Control; Controlled Environment; Human Engineering; Lighting; Physical Design Needs; Psychological Design Needs; Social Environment; Temperature; Thermal Environment; Visual Environment

Le Grand, Y. Light, Colour and Vision. New York: John Wiley and Sons, 1957.

Leikind, M. and J. Weiner. Visibility, a Bibliography. Washington, D. C.: Library of Congress Reference Department, Card Division, Technical Information Division, July 1952.

Lewin, Ian (Dr.). "Physical Factors Affecting Visual Performance", Optical Spectra, (Nov/Dec 1969), 55-58.

*Human Factors; *Physical Environment; *Task Performance; *Visual Perception; Contrast; Glare; Visual Discrimination; Visual Environment

Logan, Henry L. "The Orientation Reflex", Illuminating Engineering, (Jan. 1954), 19-29.

*Environmental Influences; *Lighting; *Motor Reactions; *Space Orientation; *Vision; Environmental Research; Eyes; Illumination Levels; Physiology; Safety; Visual Environment; Visual Perception

MacAdam, David L. "Visual Sensitivities to Color Differences in Daylight", Journal of the Optical Society of America, 32 (1942), 247.

Miles, W. R. "Light Sensitivity and Form Perception in Dark Adaptation", Journal of the Optical Society of America, 43 (1953), 560-566.

Miller, G. A. Language and Communication. New York: McGraw-Hill, 1951.

Pratt, Carroll C. "The Role of Past Experience in Visual Perception", Journal of Psychology, 30 (1950), 85-107.

Preston, K.; Schwankl, H. P.; and M. A. Tinker. "The Effect of Variations in Color of Print and Background on Legibility", Journal of General Psychology, 6 (1932), 459-461.

Ruesch, Jurgen and Weldon Kees. Non-Verbal Communication. Berkeley, California: University of California Press. 1956. 205 pp.

Smith, F. O. "A Study to Determine the Relative Effectiveness (Visibility) of Red, Orange, Yellow, Green, and Blue Under Certain Specified Conditions", Journal of Experimental Psychology, 26 (1940), 124-128.

Sommer, Robert. "Personal Space", AIA Journal, (Dec. 1962), 21-23.

*Interior Space; *Psychological Design Needs; *Social Environment; *Space Utilization; Environmental Criteria; Environmental Influences; Group Relations; Psychological Needs; Social Factors; Social Psychology

Stewart, Daniel K. The Psychology of Communication. New York: Funk and Wagnalls, 1968-1969.

Weston, H. C. Sight, Light and Work, 2nd Ed. London: H. K. Lewis & Co. Ltd. 1962. 283 pp.

*Environmental Influences; *Lighting; *Performance Specifications; *Vision; *Visual Environment; Color; Daylighting; Environmental Research; Eyes; Glare; Human Engineering; Illumination Levels; Physiology; Safety; Solar Radiation; Task Performance

THE DESIGN OF VISUAL COMMUNICATIONS

Brinkley, John. Lettering Today. New York: Reinhold Pub. Corp., 1965.

Burns, Aron. Typography. New York: Reinhold Pub. Corp., 1961.

"Campus Graphics Designing a Campus Signage System", College & University Business, 17 (Nov. 1969).

*Campus Planning; *Design; *Graphic Arts; Commercial Art; Design Needs; Design Requirements; Educational Facilities; Traffic Signs

Cataldo, John W. Graphic Design and Visual Communications. Scranton, Pa.: International Textbook Co., 1966.

Chambliss, J. W. "Color on Route Markers Aids the Motorist", Public Works, 85 (March 1954), 68-69.

Cirlot, J. E. A Dictionary of Symbols. New York: Philosophical Library, 1963.

Cristie, A. W. and K. S. Rutley. "Lettering and Legibility", Design, London (1961).

"Direction by Color Signs for Arizona", Roads and Streets, 97 (September 1954), 68-69, 86.

Froshaug, Anthony. "Road Wide Traffic Signs", Design, London (1963).

Gray, Milner and Ronald Armstrong. Lettering for Architects and Designers. New York: Reinhold Pub. Corp., 1963.

*Design; *Design Requirements; *Graphic Arts; *Information Dissemination; *Signs; Building Design; Commercial Art; Communications; Traffic Circulation; Traffic Signs

Identification of Colors for Building. Washington, D. C.: Executive Vice President, Building Research Institute, 1725 DeSales Street, N.W., Fall Conference, 1961, 73 pp. and/or Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-$0.50, HC-$3.75, ED 026-831, 1962, 73 pp.

*Buildings; *Color Planning; *Environmental Research; *Identification; *Specifications; Architecture; Building Trades; Communication Problems; Coordination; Environmental Influences; Graphic Arts; Merchandising; Scientific Principles; Standards

Kramden, Martin. "Signs and Symbols in Graphic Communication", Design Quarterly, Minneapolis, Minn.: Walker Art Center, (1962).

Larson, Leslie. Lighting and Its Design. New York: Whitney Library of Design, a Division of Whitney Publications, Inc., 1964. 228 pp.

*Architecture; *Illumination Levels; *Lighting; *Lighting Design; *Vision; Lights; Photographs

Seagers, Paul W. "Developing a Color Treatment for School Rooms", Illuminating Engineering, (June 1953), 296-298.

*Color; *Environmental Influences; *Physical Design Needs; *School Design; *Visual Environment; Classroom Design; Interior Design; Lighting Design; Psychology; Vision

"Sign Program for a University", Architectural and Engineering News, 10 (June 1968), 58-59.

*Campus Planning; *Graphic Arts; *Parking Areas; *Signs; *Universities; Printing; School Buildings; Traffic Regulations

Site Products. Performance Criteria, Interim. Albany, New York: State University Construction Fund, 195 Washington Avenue. 136 pp.

*Campus Planning; *Design; *Environmental Criteria; *Performance Criteria; *Site Development; Architectural Elements; Building Design; Communications; Emergency

Programs; Equipment; Facility Requirements; Fire Protection; Human Engineering; Lighting; Parking Facilities; Planning; Structural Building Systems; Task Analysis; Vehicular Traffic; Visual Environment

Turnbull, Arther T. and Russell N. Baird. The Graphics of Communication. New York: Holt, Rinehart & Winston, Inc., 383 Madison Avenue, 1964.

The University of Michigan Campus Identification Signs. Bethesda, Maryland: ERIC Document Reproduction Service, National Cash Register Company, MF-$0.25, HC-$1.65, ED 023 285, 1967, 31 pp.

*Campus Planning; *Design Needs; *Information Dissemination; *Traffic Circulation; *Traffic Signs; College Planning; Master Plans; Motor Vehicles; Parking Areas; Pedestrian Traffic; Semiotics; Site Analysis; Traffic Control; Traffic Patterns; Traffic Safety

University Facilities Research Center. Parking Programs for Universities. New York: Educational Facilities Laboratories, Inc., 477 Madison Avenue, 1960.

"Which Way?" Architectural and Engineering News, 11 (March 1969), 21-27.

*Building Design; *Communications; *Criteria; *Public Facilities; *Signs; Architectural Character; Cultural Enrichment; Design Needs; Graphic Arts; Information Needs; Interior Space; Planning; Specifications; Visual Stimuli